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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/445,990	12/16/1999	LUTZ LANGHANS	LANGHANS	1632

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EXAMINER

MENEFEE, JAMES A

ART UNIT PAPER NUMBER

2828

DATE MAILED: 09/16/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

09/445,990

Applicant(s)

LANGHANS ET AL.

Examin r

James A. Menefee

Art Unit

2828

-- Th MAILING DATE of this communicati n appears on the c ver sheet with the corresp ndenc address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 June 2002 .
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8,10 and 11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8,10 and 11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____ .
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____ .

DETAILED ACTION

This action is in response to applicant's response filed 11 June 2002. Claims 1-8 and 10-11 are pending.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 5 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Chesler et al. (US 3,860,000). Chesler discloses in Fig. 3 a stable resonator for solid-state lasers comprising a laser rod 35, a rear mirror 30, and a semi-reflecting output mirror 32. Chesler discloses that the mirror 30 may be made separate from the rod. IF this is done, the rear mirror 30 would be convex and the end of the rod facing the rear mirror would be planar. The other end of the rod 31 is convex. The output mirror 32 is arranged in close proximity to the rod 35. It is disclosed that the rod 35 may be an Nd:YAG rod.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maag et al. (US 5,692,005, previous cited by Applicant).

Regarding claim 1, Maag discloses a stable resonator for solid-state lasers comprising a laser rod 1, a convex rear mirror 7, and an output mirror 3. The output mirror is in close proximity to the rod. It is not disclosed that the end of the rod facing the rear mirror is convex. However, a convex optical element 2 is disposed on that end of the rod. Examiner contends that it would have been obvious to one skilled in the art to make integral the optical element with the rod because “the use of a one piece construction...would be merely a matter of obvious engineering choice.” See *In re Larson*, 340 F.2d 965, 144 USPQ 347, 349 (CCPA 1965). After this obvious integration, then the end of the rod facing the rear mirror will be convex.

Regarding claims 2-3, the end of the rod facing the output mirror is planar. It is not disclosed that the rod and the output mirror may be made integral. Examiner contends that it would have been obvious to one skilled in the art to make integral the output mirror with the rod because “the use of a one piece construction...would be merely a matter of obvious engineering choice.” See *In re Larson*, 340 F.2d 965, 144 USPQ 347, 349 (CCPA 1965).

Regarding claim 6, the rod 1 may be an Nd:YAG rod.

Claims 4, 8, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chesler.

Regarding claim 4, Chesler discloses the claimed invention as in the rejection of claim 5 above, but does not disclose that the output mirror is integral with the rod. Examiner contends that it would have been obvious to one skilled in the art to make integral the output mirror with

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the rod because “the use of a one piece construction...would be merely a matter of obvious engineering choice.” See *In re Larson*, 340 F.2d 965, 144 USPQ 347, 349 (CCPA 1965).

Regarding claim 8, it is disclosed that the rod may be an Nd:YAG rod.

Regarding claim 11, it is not disclosed that the output mirror be within 10 mm of the rod. However, Chesler discloses that the length p between the rod and the output mirror is variable. It would have been an obvious optimization to one skilled in the art to vary the length p such that it falls into the claimed range, as this varying will adjust the mode radius.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maag as applied to claims 1-3 and 6 above, and further in view of Chesler. Maag teaches the limitations of claims 1-3 and 6 as shown above, but does not teach that the output mirror be located within 10 mm of the rod. Chesler teaches that this limitation is obvious with motivation as shown in the rejection of claim 11 above.

Response to Arguments

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James A. Menefee whose telephone number is (703) 605-4367. The examiner can normally be reached on M-F 8:30-5.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Ip can be reached on (703) 308-3098. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

JM
August 27, 2002


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